

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed January 21, 2011 have been fully considered but they are not persuasive.

In re pages 9-10, applicant argues, with respect to claim 39, that Tsinberg et al merely collecting EPG data by checking whether a database contains a list of previously monitored channels and it is checked and combining with already existing EPG data and collected EPG data, but fails to disclose "wherein the program guide information is acquired by searching the accessible channels according to past tendency of a user" and "the entire EPG can be display using graphics overlay 7" disclosed in Tsinberg et al is different from "simultaneously with the acquiring of the program guide information, displaying a program list including program guide information of channel".

In response, the examiner respectfully disagrees. As discussed in the last Office Action, Tsinberg discloses in col. 5, lines 47-55 that "The configuration of FIG. 3, in either embodiment, has the additional benefit of allowing acquisition of EPG information from different RF channels while the viewer stays tune to a particular channel on main tuner 1. As described above, the current broadcast standard does not require a particular broadcaster to carry EPG information of other broadcasters. Thus, if a viewer calls up the EPG when tuned to a channel, he will only see the program information associated with the channel". From this passage, it is clear that the program guide information (EPG) is acquired by searching the accessible channels according to past tendency of a user.

Additionally, Tsinberg et al discloses in col. 5, lines 57-67 that “The system of FIG. 3 solves this problem by using PIP tuner 8 and CPU 6 to collect and combine EPG information from other channels. The steps for collecting EPG data are shown in FIG. 4. First, CPU 6 determines if it has already collected EPG data from all the digital channels (step 40). If so, the routine ends (step 41). Otherwise, CPU 6 tunes PIP tuner 8 to a new channel (step 42) and **determines if EPG data has already been collected for that particular channel (step 43)**. If so, CPU 6 tunes PIP tuner 8 to another channel (step 42), and this process continues until a channel for which no EPG data has been collected is found”. The capability of determining if EPG data has already been collected for that particular channel (step 43) anticipates the claimed that the program guide information (EPG) is acquired by searching the accessible channels according to past tendency of a user.

Tsinberg also discloses in col. 6, lines 21-25 that “At the conclusion of this process, CPU 6 will have gathered EPG information from all the digital channels. It combines this information so that, upon request of the viewer, the entire EPG can be displayed using graphics overlay 7”. From this passage, it is clear that the program list including program guide information of channel (the EPG) is displayed simultaneously with the acquiring of the program guide information because the program guide can be displayed anytime as requested by viewer including at the time of acquiring of the program guide information and this displaying of the EPG is not different from the claimed “simultaneously with the acquiring of the program guide information, displaying a program list including program guide information of channel”.

In re page 10, applicant argues, with respect to claim 3, that the combination of Cuccia and Tsinberg et al does not teach or suggest wherein the past tendency of the user can be estimated by a probability estimator of the receiver as recited in claim 3.

In response, the examiner respectfully disagrees. As discussed in claim 39 above, that the claimed probability estimator is anticipated by the determining the past tendency of Tsinberg and Cuccia.

In re pages 10-11, applicant argues, with respect to claim 4, that the claim should not be rejected on the ground of old combination.

In response, it is noted that claim 4 is not rejected based on old combination. The rejection of claim 4 is based on the generating a message indicating that the user must wait until the capturing image is written of Anderson et al.

In re 11, applicant states that claims 5-6 are patentable due at least to their depending from claim 3, as well as for the additional recitations therein.

In response, as discussed in claim 3 above, the combination of Tsinberg and Cuccia discloses all the claimed limitations of claim 3.

In re pages 11-12, applicant argues, with respect to claim 7, that Cuccia fails to disclose the claimed "the sequence of accessing channels by proximity of channels to the channel tuned before the program guide command is executed" as recited in claim 7.

In response, as discussed in the previous Office Actions, the sequence of channels to be scanned of Cuccia or Tsinberg is proximity of channels to the channel tuned before the program guide command is executed.

In re page 12, applicant argues, with respect to claim 8, that Cuccia fails to disclose “determining the order of priority of channels ... according to a channel up/down command input before corresponding channels are accessed” as recited in claim 8.

In response, as discussed in the previous Office Actions, the scanning of EPG of Cuccia or Tsinberg is based on up/down channel command as required by claim 8.

In re pages 12-13, applicant argues, with respect to claim 9, that Cuccia fails to disclose “an upward or downward direction” as recited in claim 9.

In response, as discussed in the previous Office Actions, the scanning of EPG of Cuccia or Tsinberg is upward or downward direction.

In re page 13, applicant argues, with respect to claim 10, that none of cited references teach or suggest “searching channels upward or downward from the channel tuned” as recited in claim 10.

In response, as discussed in the previous Office Actions, the scanning of EPG of Cuccia or Tsinberg is upward or downward from the channel tuned as required by claim 10.

In re page 13, applicant states that claim 12 is patentable due at least to the same rationales as claim 3.

In response, as discussed above with respect to claim 3, that the cited references disclose all the claimed limitations of claim 3.

In re page 13, applicant states claims 13-16 are patentable due at least their depending from claim 12, as well as for the additional recitations therein.

In response, as discussed above with respect to claim 12, that the cited references disclose all the claimed limitations of claim 12.

In re page 13, applicant states that claims 11 and 24 are patentable due at least to their depending from claims 1 and 19, respectively.

In response, as discussed above with respect to claims 1 and 19, the cited references disclose all the claimed limitations of claims 1 and 19.

In re pages 13-14, applicant argues, with respect to claim 16, that the combination of Cuccia and Tsinberg et al does not teach or suggest the invention as recited in claim 16 because the cited references fail to disclose or teach the claimed “wherein said acquiring the guide information comprises searching channels upward or downward from the currently tuned in channel before the program guide command is executed”.

In response, as discussed in the previous Office Actions, the scanning of Cuccia or Tsinberg is upward or downward from the channel tuned as required by claim 16.

In re page 14, applicant states that claim 17 is patentable due at least to its depending from claim 12, as well as for the additional recitations therein.

In response, as discussed above and in the previous Office Actions, the combination of Cuccia and Tsinberg discloses all the claimed limitations of claim 12.

In re page 14, applicant states that claim 19 is patentable due at least the same rationales as claim 12, as well as for the additional recitations therein.

In response, as discussed above and in the previous Office Action, that the cited references discloses all the claimed limitations.

In re pages 14-15, applicant argues, with respect to claim 18, that Mugura et al discloses displaying status related to “a particular channel program at a designated time, a channel program has been set for recording, and whether a program is designated as a favorite program” but fails to disclose “displaying a message indicating a status of program guide information in response to the program guide information of a corresponding channel not being stored” as recited in claim 18.

In response, as discussed in the last Office Action, the status of channel programs have been set for recording of Mugura et al anticipates the claimed “a message indicating a status of program guide information in response to the program guide information of a corresponding channel not being stored” of claim 18.

In re page 15, applicant states that claim 25 is also patentable due at least to the same or similar reasons as claim 18.

In response, as discussed above and in the previous Office Actions, the cited references disclose all the claimed limitations of claim 18.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 39 is rejected under 35 U.S.C. 102(e) as being anticipate by Tsinberg et al. (US Patent No. 6,212,680 B1).

In considering claim 39, Tsinberg et al discloses all claimed subject matter, note 1) the claimed acquiring program guide information of the accessible channels from a tuner in response to the program guide command, wherein the program guide information is acquired by searching the remaining accessible channels according to a past tendency of a user is met by the PIP tuner 8 and the CPU 6 which collect and combine EPG information from all the channels (Figs. 3-4, col. 5, line 48 to col. 6, line 51), and 2) the claimed simultaneously with the acquiring of the program guide information, displaying the program list including program guide information of channels obtained by the tuner before the program guide command is applied, in response to the program guide command is met by CPU 6 will have gathered EPG information from all the digital channels, it combines this information so that, upon request of the viewer, the entire EPG can be displayed using graphics overlay 7, simultaneously the CPU continues search all digital broadcast channels looking for EPG information (Figs. 3-5, col. 5, line 48 to col. 6, line 51).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-10, 12-15, 19-23, 27 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Tsinberg et al. (US Patent No. 6,212,680 B1).

In considering claim 3, Cuccia discloses all claimed subject matter, note 1) the claimed acquiring program guide information of the accessible channels being broadcast from a tuner in response to the program guide command, wherein the accessible channels include a currently tuned in channel, a preferential channel, and remaining channels, wherein the program guide information is acquired by searching the accessible channels according to a past tendency of a user, wherein the past tendency of the user can be estimated by a probability estimator of the receiver is met by the tuner 103 and the micro processor 118 (Figs. 1, col. 3, line 55 to col. 4, line 63), 2) the claimed storing the acquired program guide information is met by the digital memory 120 (Fig. 1, col. 3, line 55 to col. 4, line 63), 3) the claimed writing a program list on the basis of the stored program guide information is met by the digital memory 120 (Fig. 1, col. 3, line 55 to col. 4, line 63), and 4) the claimed wherein the currently tuned in channel is a channel corresponding to a program which is viewed immediately before the program guide command is executed, and wherein said acquiring of the program guide information is executed in response to the program guide command being input by a user is met by the tuner 103 which free to scan the signals for the EPG information, the scanning process can be initiated by the user or started automatically (col. 3, line 55 to col. 4, line 63).



However, Cuccia explicitly does not disclose the claimed displaying the written program list to the user in response to the program guide command, simultaneously with the acquiring of the program guide information.

Tsinberg et al teach that the configured of Fig. 3, in either embodiment, has the additional benefit of allowing acquisition of EPG information from different RF channels while the viewer stays tuned to a particular channel on main tuner 1 (col. 5, lines 48-56) and at the conclusion of this process, CPU 6 will have gathered EPG information from all the digital channels, it combines this information so that, upon request of the viewer, the entire EPG can be displayed using graphics overlay 7 (Figs. 3-5, col. 5, line 48 to col. 6, line 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate automatically checked for EPG information using the second tuner as taught by Tsinberg et al into Cuccia's system in order to provide a method for immediately updating the EPG information about all the channels of the digital TV set based on the latest correct EPG information.

In considering claim 4, the combination of Cuccia and Tsinberg et al discloses all features of the instant invention as discussed in claim 3 above, except providing the claimed a message indicating that the user must wait until the program list is written. However, the capability of displaying message indicated the user must wait until the program is written is well known and old in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the combination of Cuccia

and Tsinberg et al's system with the well known message in order to increase the efficiency system operation in the combination of Cuccia and Tsinberg et al.

In considering claim 5, the claimed further comprising determining whether the program guide information is effective by comparing a current time to an effective period of stored program guide information and proceeding to said writing the program list when the stored program guide information is effective, before said acquiring the program guide information is met by the timer 119 or the flow chart of Fig. 2 (Figs. 1 and 2, col. 4, lines 36-55 and col. 5, lines 20-57 of Cuccia).

In considering claim 6, Cuccia discloses all claimed subject matter, note 1) the claimed writing and displaying a program list including the program guide information of channels tuned before the program guide command is executed from the stored program guide information is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65), 2) the claimed the acquiring from the accessible channels the program guide information for each channel by searching for the accessible channels in a same source as the viewed channel in a background operation while the program list is referred to is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode (Fig. 1, col. 4, line 11 to col. 5, line 19 of Cuccia).

In considering claim 7, the claimed said acquiring the program guide information comprises determining the sequence of accessing channels by proximity of channels to the channel tuned before the program guide command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-

by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65 of Cuccia).

In considering claim 8, the claimed said acquiring the program guide information comprises determining the order of priority of channels having the same proximity to the channel tuned before the program guide command is executed according to a channel up/down command input before corresponding channels are accessed is met by the remote control unit 110 and the compound EPG (Fig. 1, col. 5, lines 1-65 of Cuccia).

In considering claim 9, the claimed wherein an upward or downward direction is preferential when no channel up/down command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65 of Cuccia).

In considering claim 10, the claimed said acquiring the program guide information comprises searching channels upward or downward from the channel tuned before the program guide command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65 of Cuccia).

Claim 12 is rejected for the same reason as discussed in claims 3 and 6 and further 1) the claimed a program guiding method, for use with a tuner is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode (Fig. 1, col. 4, line 11 to col. 5, line 19 of Cuccia), 2) the claimed rewriting a program list on the basis of the stored program guide information is met by the TV-set

updates the EPG information (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65 of Cuccia), and 3) the claimed displaying the rewritten program list to a user is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65 of Cuccia).

Claims 13-16 are rejected for the same reason as discussed in claims 7-10, respectively.

In considering claim 19, Cuccia discloses all claimed subject matter, note 1 ) the claimed the apparatus being for use with a tuner tuning a currently tuned in channel to be displayed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand- by mode (Fig. 1, col. 4, line 11 to col. 5, line 19), 2) the claimed a program guide information detector detecting program guide information for the currently tuned in channel introduced via said tuner is met by the micro processor 118 (Fig. 1, col. 3, line 55 to col. 4, line 63), 3) the claimed a memory storing the program guide information for each channel detected by said program guide information detector is met by the digital memory 120 (Fig. 1, col. 3, line 55 to col. 4, line 63), 4) the claimed a key input introducing a user manipulation command such as a program guide command or a channel search command is met by the remote control unit 110 and the compound EPG (Fig. 1, col. 5, lines 1-65), 5) the claimed a microprocessor, in response to the manipulation command input via said key input, that writes a program list based on program guide information stored in said memory and searches for accessible channels by controlling said tuner in a background operation while a user refers to the program list, wherein the program guide information is

acquired by search the remaining accessible channels according to a past tendency of a user is met by the micro processor 118 (Fig. 1, col. 3, line 55 to col. 5, line 19), 6) the claimed a character signal generator generating a character signal corresponding to the program list written by said microprocessor and providing the character signal to a screen is met by the television screen 108 and the compound EPG (col. 3, lines 55-64 and col. 5, lines 58-65), and 7) the claimed a display to display the program list simultaneously with the detecting of the program guide information is met by the television screen 108 and the compound EPG (col. 3, line 55 to col. 5, line 57).

However, Cuccia explicitly does not disclose the claimed a microprocessor searches for remaining accessible channels to obtain program guide information being broadcast for the remaining accessible channels by controlling said tuner in a background operation while a user refers to the program list.

Tsinberg et al teach that the configured of Fig. 3, in either embodiment, has the additional benefit of allowing acquisition of EPG information from different RF channels while the viewer stays tuned to a particular channel on main tuner 1 (col. 5, lines 48-56) and at the conclusion of this process, CPU 6 will have gathered EPG information from all the digital channels, it combines this information so that, upon request of the viewer, the entire EPG can be displayed using graphics overlay 7 (Figs. 3-5, col. 5, line 48 to col. 6, line 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate automatically checked for EPG information using the second tuner as taught by Tsinberg et al into Cuccia's system in order to provide a

method for immediately updating the EPG information about all the channels of the digital TV set based on the latest correct EPG information.

Claims 20-23 are rejected for the same reason as discussed in claims 7-10, respectively.

In considering claim 27, the claimed wherein said acquiring the program guide information comprises the step of determining the sequence of accessing channels by proximity of the channels to the channel tuned and by a channel up/down command input just before a channel search is determined is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65 of Cuccia).

In considering claim 37, the claimed wherein the program guide information is shown on the screen while the program guide information is acquired by the multichannel receiver is met by the multi-channel EPG searching (Fig. 5, col. 6, lines 27-51 of Tsinberg et al)

Claim 38 is rejected for the same reason as discussed in claim 12.

6. Claims 11, 16-17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Tsinberg et al. (US Patent No. 6,212,680 B1), and further in view of Saitoh (US Patent 5,444,499).

In considering claim 11, the combination of Cuccia and Tsinberg et al discloses all the features of the instant invention except for providing further comprising writing a probability distribution of tuned channels, wherein said acquiring the program guide

information comprises searching the channels in an order of priority according to a probability distribution of channels. Saitoh teaches that the controller can calculate a probability that channels are to be selected, by accumulating a number of times which the channels are tuned (col. 5, lines 46-62) and searches for the channels in an order of priority according to a probability of tuning by the channels calculated (col. 6, lines 15-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the combination of Cuccia and Tsinberg et al's system with the controller as taught in Saitoh in order to obtain the television guide without carrying out cumbersome tuning operations.

In consideration of claim 16, the claimed wherein said acquiring the guide information comprises searching channels upward or downward from the channel tuned before the program guide command is executed is met by the tuner 103 which is free to scan the signals for the EPG information when the TV-set is in stand-by mode and the compound EPG (Fig. 1, col. 4, line 11 to col. 5, line 19 and col. 5, lines 58-65 of Cuccia).

In consideration of claim 17, the claimed further comprising writing a probability distribution of tuned channels, and wherein the channels are searched in order of priority according to the probability distribution of channels is met by the search of channels based on the priority disclosed in Saitoh, column 6, lines 15-38.

Claim 24 is rejected for the same reason as discussed in claim 11.

7. Claims 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (US Patent No. 6,337,719 B1) in view of Tsinberg et al. (US Patent No. 6,212,680 B1, and further in view of Mugura et al. (US Patent No. 6,243,142 B1).

In consider claim 18, the combination of Cuccia and Tsinberg et al discloses all the limitations of the instant invention as discussed in claims 3 and 12 above, except for providing the claimed wherein said displaying the written program list comprises displaying a message indicating a status of program guide information in response to the program guide information of a corresponding channel not being stored. Mugura et al teach that the broadcast system generates at least one graphic image to indicate a status of these programs, the status including whether a user has selected pay-per-view broadcasts for purchase. The status also includes whether a broadcast system timer has been set to tune to a particular channel program at a designed time, whether a channel program has been set for recording, etc. (col. 2, lines 20-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the graphic image to indicate a status of programs as taught by Mugura et al into the combination of Cuccia and Tsinberg et al's system in order to provide channel selection guides with many options regarding programs that are available for broadcast.

Claim 25 is rejected for the same reason as discussed in claim 18.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 9:00 AM - 6:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jefferey F. Harold can be reached on (571) 272-7519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 8, 2011

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